

EXECUTIVE ORDER 48

ENERGY EFFICIENCY IN STATE GOVERNMENT

HISTORY

- EXECUTIVE ORDER 54
 - SIGNED BY GOVERNOR WARNER JULY 2003
 - AGENCIES SHOW 10% REDUCTION IN ENERGY **CONSUMPTION** BY 2006 BASED ON 2002 BASELINE

EXECUTIVE ORDER 48

- SIGNED ON APRIL 5, 2007 BY GOVERNOR KAINE
- CEM REQUIRED FOR LARGEST ENERGY USERS
- SET ENERGY SAVING GOALS FOR ALL STATE AGENCIES
- ADDRESSES:
 - NEW AND RENOVATED STATE-OWNED FACILITIES
 - LEASED FACILITIES
 - TRANSPORTATION ENERGY USE
 - EQUIPMENT & SUPPLIES
- CREATED SENIOR ADVISOR FOR ENERGY POLICY AND ENERGY POLICY ADVISORY COUNCIL

AGENCY ENERGY MANAGER

- AGENCY ENERGY COSTS EXCEED \$1 MILLION
 - AGENCY ENERGY MANAGER MUST BE CERTIFIED AS A CERTIFIED ENERGY MANAGER (CEM) BY THE ASSOCIATION OF ENERGY ENGINEERS (AEE)
 - MUST BE CERTIFIED BY JUNE 30, 2008
- AGENCY ENERGY COSTS LESS THAN \$1 MILLION
 - CEM NOT REQUIRED BUT CERTAINLY WELCOMED!
- CURRENTLY WORKING WITH AEE TO HOLD THE 5 DAY CEM TRAINING CLASS FOLLOWED BY THE EXAM
 - 20 STUDENTS WILL COST ABOUT \$1000 EACH PLUS TRAVEL
 - MORE THAN 20 STUDENTS THE COST WILL GO DOWN
 - AEE COST AT SEMINAR IS \$1495 EACH PLUS TRAVEL
 - LOCATION OF CLASS WILL BE IN RICHMOND AREA AND DATE TBD

AGENCY ENERGY GOALS

- EO-54 (2003)
 - AGENCIES WERE REQUIRED TO REDUCE ENERGY **CONSUMPTION** BY 10% OF FISCAL YEAR 2002 BY FISCAL YEAR 2006
- IF AGENCY MET EO-54
 - MUST REDUCE THE ANNUAL COST OF **NON-RENEWABLE ENERGY PURCHASES** BY AT LEAST 15% OF FISCAL YEAR 2006 BY FISCAL YEAR 2010
- IF AGENCY DID NOT MEET EO-54
 - MUST REDUCE THE ANNUAL COST OF **NON-RENEWABLE ENERGY PURCHASES** BY AT LEAST 20% OF FISCAL YEAR 2006 BY FISCAL YEAR 2010

HOW TO MEET EO-48

- AGGRESSIVELY PURSUE:
 - ALL ENERGY PROJECTS WITH QUICK PAYBACK... CFL, ENERGY PROJECTS, OTHER
 - ENERGY SERVICES PERFORMANCE CONTRACTS (ESPC)
 - FUNDED ENERGY PROJECTS
 - ALTERNATE PROCUREMENT METHODS OF ENERGY
 - NEW & RENOVATED FACILITIES USING LEED (Leadership in **E**nergy and **E**nvironmental **D**esign)
 - TRANSPORTATION ENERGY USE
 - PURCHASES OF RENEWABLE ENERGY
 - AFTER ROOF REPAIRS, ALL MAINT RESERVE PROJECTS SHOULD BE ENERGY RELATED

ENERGY SERVICES PERFORMANCE CONTRACTS (ESPC)

- DGS CONTRACT INFORMATION ON ESPC
- 10 STATE APPROVED **ENERGY SERVICES COMPANIES (ESCO)**
- CURRENTLY HAVE APPROXIMATELY \$120 MILLION UNDER CONTRACT WITH STATE AGENCIES
- GUARANTEED SAVINGS OF APPROXIMATELY \$8 MILLION PER YEAR
- NEW PHASES OR SAVINGS ABOVE GUARANTEE IN AN EXISTING ESPC COUNT TOWARDS EO-48

How the Contracts Work

- ENERGY PERFORMANCE CONTRACTING
 - 10 COMPANIES PRE-QUALIFIED
 - CONTACT 3 OR MORE FROM THE PRE-QUALIFIED POOL
 - THEY MEET WITH YOU
 - THEY PERFORM A “BACK OF THE ENVELOPE” AUDIT
 - YOU INTERVIEW AND DISCUSS THE AUDITS
 - YOU SELECT AND BEGIN NEGOTIATIONS FOR THE ENERGY CONTRACT

HOW TO IMPLEMENT A PROJECT

- CONSIDER YOUR FINANCING OPTIONS
 - STATE AGENCY –
 - TREASURY FINANCING
 - MAINTENANCE RESERVE
 - CAPITAL \$
 - OUTRIGHT PURCHASE
 - PUBLIC BODIES
 - MUNICIPAL BONDS
 - LEASE PURCHASE
 - THIRD PARTY FINANCING
 - OUTRIGHT PURCHASE
 - LEASE

HOW TO IMPLEMENT A PROJECT

- DEFINE YOUR NEEDS
 - WHAT ARE YOUR GREATEST NEEDS?
 - OLD CHILLER THAT IS INEFFICIENT
 - STEAM LINE LEAKS OR STEAM TRAPS
 - HIGH ENERGY COSTS (ELECTRIC, HEATING FUELS, ETC.)
 - HIGH WATER CONSUMPTION
 - BUILDING ENVELOPE
 - OLD BOILERS
 - PM SOFTWARE PROGRAM
 - OLD HVAC EQUIPMENT
 - FREQUENCY DRIVES
 - UTILITY TRACKING SOFTWARE
 - LIGHTING

HOW TO IMPLEMENT A PROJECT

- AFTER YOU HAVE DEFINED YOUR NEEDS AND GIVEN CONSIDERATION TO HOW YOU WOULD LIKE TO FINANCE YOUR PROJECT...
- SELECT A MINIMUM OF 3 CONTRACTORS TO PERFORM THE “BACK OF THE ENVELOPE AUDIT”.
- REFER TO CONTRACTOR QUALIFICATIONS AND SELECT BASED ON PROJECT NEEDS.

HOW TO IMPLEMENT A PROJECT

- SET UP A WALK THROUGH FOR THE CONTRACTORS YOU SELECTED, INCLUDE ALL OF THEM AT THE SAME TIME
- PUBLIC BODIES NEED TO PROVIDE THE CONTRACTORS CERTAIN INFORMATION
 - FACILITY DATA
 - UTILITY DATA
 - MAINTENANCE HISTORY

HOW TO IMPLEMENT A PROJECT

- SET A DEADLINE FOR THE “BACK OF THE ENVELOPE”, REMEMBER THE MORE TIME WE ALLOW, THE BETTER THE INFORMATION, 3-4 WEEKS
- WHEN YOU RECEIVE THE “BACK OF THE ENVELOPE AUDITS”, REVIEW THEM AND SET UP YOUR INTERVIEWS

HOW TO IMPLEMENT A PROJECT

- SELECT CONTRACTOR BASED ON ABILITIES AND APPROACH
- SET UP A KICK OFF MEETING TO BEGIN THE “TECHNICAL ENERGY AND WATER SAVINGS AUDIT”
- THE COST OF THE TECHNICAL AUDIT CAN BE ROLLED INTO YOUR ENERGY CONTRACT

HOW TO IMPLEMENT A PROJECT

- ALLOW TIME FOR YOUR TECHNICAL AUDIT
- ONCE THE TECHNICAL AUDIT IS COMPLETE, MAKE SURE EVERYONE IS IN AGREEMENT WITH THE POTENTIAL SAVINGS AND APPROACH TO THE PROJECT
- IF EVERYTHING IS IN AGREEMENT, PROCEED WITH THE ENERGY CONTRACT
- IF CONTRACT IS OVER \$3 MILLION THEN IT MUST GO THROUGH ABBREVIATED CAPITAL PROCESS
- DMME MUST REVIEW PROJECT

RENEWABLE ENERGY

- WIND
- SOLAR
- GEOTHERMAL
- BIOFUELS
- HYDRO
- LANDFILL GAS
- BIOMASS

ALTERNATE PROCUREMENT METHODS OF ENERGY

- STATE CONTRACTS
 - MANDATORY STATEWIDE NATURAL GAS CONTRACT WITH STAND ENERGY
 - DIVERSIFIED PORTFOLIO
 - STORAGE
 - LOAD BALANCING
 - FINANCIAL (HEDGING)
 - FUTURE NATURAL GAS PROGRAMS
 - CENTRALIZED PROCUREMENT
 - NEGOTIATED LDC CONTRACTS FOR STATE AGENCIES
 - PURCHASE PIPELINE CAPACITY
 - AGGREGATED POOLS WITHIN EACH LDC
 - POSSIBLE NEW PIPELINES
 - MANDATORY STATEWIDE OIL CONTRACT WITH JAMES RIVER SOLUTIONS
 - FIXED PRICING
 - FUTURES (HEDGING)

EXAMPLE OF MEETING EO-48

- DMME SPENT \$1 MILLION FOR ENERGY IN 2006 AND MET EO-54
- DMME'S GOAL IS **\$150,000** REDUCTION IN NON-RENEWABLE ENERGY PURCHASES BY 2010 (15% OF \$1 MILLION)

EXAMPLE OF MEETING EO-48

• ESPC	\$45,000
• LEED EB DESIGN FOR RENOVATION	\$10,000
• NATURAL GAS PURCHASES	\$20,000
• COMBINED ELEC METERS	\$10,000
• CONVERTED PART OF THE FLEET TO BIODIESEL	\$35,000
• SEPARATE LIGHTING PROJECT	\$10,000
• PURCHASE WIND POWER	\$10,000
• PURCHASE LANDFILL GAS	<u>\$22,000</u>
	\$162,000

EXAMPLE OF MEETING EO-48

- DMME'S GOAL WAS \$150,000 AND THROUGH VARIOUS PROJECTS DMME SHOWED A TOTAL COST AVOIDANCE FOR NON-RENEWABLE ENERGY OF \$162,000
- IF DMME MAINTAINS THE SAVINGS UNTIL 2010 THEY HAVE MET EO-48

BENEFITS OF MEETING EO-48

- AGENCY MET THE REQUIREMENTS OF EO-48
- AGENCY CAN SHOW ENERGY PROJECTS, PURCHASE OF RENEWABLES, ETC ON THEIR PORTFOLIO
- ALL PROJECTS HELP THE AGENCY MOVE TOWARDS ENERGY STAR OR LEED/LEED EB CERTIFICATIONS
- LOWER GREEN HOUSE GAS (GHG) EMISSIONS
- BETTER PUBLIC RELATIONS
- IN MOST CASES THERE IS AN AVOIDED COST FOR ENERGY

NEW AND RENOVATED STATE-OWNED FACILITIES

- NEW CONSTRUCTION
 - OVER 5,000 GSF
 - NOT ADVERTISED FOR ARCHITECTURAL AND ENGINEERING SERVICES AS OF APRIL 5, 2007
 - SHALL BE DESIGNED AND CONSTRUCTED CONSISTENT WITH ENERGY PERFORMANCE STANDARDS AT LEAST AS STRINGENT AS LEED SPECIFICATIONS OR EPA ENERGY STAR RATING (NO MORE VALUE ENGINEERING!)
- RENOVATION OF BUILDINGS
 - OVER 5,000 GSF
 - RENOVATION COSTS ARE GREATER THAN 50% OF THE ASSESSED VALUE OF THE BUILDING
 - NOT ADVERTISED AS OF APRIL 5, 2007
 - SHALL BE DESIGNED AND CONSTRUCTED CONSISTENT WITH ENERGY PERFORMANCE STANDARDS AT LEAST AS STRINGENT AS LEED SPECIFICATIONS OR EPA ENERGY STAR RATING
- ROOF RENOVATION
 - COSTS VS PAYBACK PERIODICALLY ASSESSED BY SENIOR ADVISOR FOR ENERGY POLICY
 - PROJECT MUST HAVE PAYBACK OF 15 YRS OR LESS
 - UNDER THE GUIDANCE OF THE SENIOR ADVISOR DGS REQUIRES THAT PHOTOVOLTAIC (PV) OR GREEN ROOF DESIGN MUST BE AN OPTION
 - AGENCIES MUST INCORPORATE A PHOTOVOLTAIC OR GREEN ROOF DESIGN

LEASED FACILITIES

- LOCATED NEAR PUBLIC TRANSIT SYSTEM
 - ¼ MILE FROM BUS, TROLLEY, METRO, COMMUTER RAIL, ETC
- ENCOURAGE PRIVATE SECTOR TO ADOPT ENERGY EFFICIENT STANDARDS
- **PREFERENCE** TO LEED FACILITIES OR ENERGY STAR DESIGNATED BUILDINGS
- **PREFERENCE** TO FACILITIES THAT ARE PEDESTRIAN AND BICYCLE ACCESSIBLE

TRANSPORTATION

- IN COORDINATION WITH DGS, POLICIES AND PROCEDURES ARE BEING DEVELOPED
- AGENCIES SHALL MAXIMIZE THE USE OF ETHANOL AND BIODIESEL WHERE FEASIBLE
- IMPLEMENT TRANSIT AND RIDE SHARING PROGRAMS
- MAXIMIZE USE OF TELECOMMUTING

REPORTING EO-48

- AGENCIES REPORT PROGRESS AS PART OF GOVERNOR'S MANAGEMENT SCORECARD
 - AGENCIES WILL ALSO SUBMIT AN ANNUAL REPORT TO DMME (SEPT OF EACH YEAR) VIA EMAIL DETAILING HOW THE SAVINGS WERE ACHIEVED AND IN WHAT AREAS SAVINGS ARE BEING MEASURED AS OUTLINED IN EO-48
- PROGRESS REPORTED QUARTERLY TO DMME AND POSTED ON PUBLIC WEBSITE

DMME'S ROLE

- ASSIST AGENCIES WITH:
 - IMPLEMENTATION OF EO-48
 - ESPC
 - UTILITIES PROCUREMENT
 - ENERGY PROJECTS
 - CALCULATE REDUCTION OF GREEN HOUSE GASES (GHG)
 - MAINTAIN SYSTEM TO MONITOR AND REPORT AGENCY ENERGY USE

CONTACT INFO

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